



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4170 BYPASS RATIO: 4.9
 UNIQUE ID NUMBER: 9PW095 PRESSURE RATIO (π_{00}): 33.8
 COMBUSTOR: Talon IIB
 ENGINE TYPE: TF RATED THRUST (F_{00}) (kN): 311.4

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	1.7	23.2	57.8	7.5
AS % OF ORIGINAL LIMIT	8.6	19.7	53.7	43.1
AS % OF CAEP/2 LIMIT (NO _x)			67.1	
AS % OF CAEP/4 LIMIT (NO _x)			77.5	
AS % OF CAEP/6 LIMIT (NO _x)			86.8	
AS % OF CAEP/8 LIMIT (NO _x)			100.1	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	3.019	0.00	0.18	31.40	5.6
CLIMB OUT	85	2.2	2.450	0.00	0.18	22.84	5.6
APPROACH	30	4.0	0.833	0.05	1.17	12.49	0.2
IDLE	7	26.0	0.255	0.83	14.04	4.18	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1048	341	5896	15526	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				1.1	18.9	49.9	5.8
SIGMA (D _p /F ₀₀ in g/kN, or SN)							
RANGE (D _p /F ₀₀ in g/kN, or SN)							

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.8-101.4
TEMPERATURE (K)	282-285.6
ABS HUMIDITY (kg/kg)	0.00362-0.00455

FUEL

SPEC	Jet A
H/C	1.89
AROM (%)	17

MANUFACTURER: Pratt & Whitney
 TEST ORGANIZATION: Pratt & Whitney
 TEST LOCATION: East Hartford, CT
 TEST DATES: 12/05/2008-13/05/2008

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

REMARKS

- Talon IIB combustor with improved exit temperature profile.
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)